

REMARKS

This Amendment is submitted in response to the Office Action dated July 9, 2007. In the Office Action, the Patent Office rejected Claims 21-24, 28-29 and 31-41 under 35 U.S.C. §103(a) as being unpatentable over Dinwoodie (U.S. Design Patent No. D408,554) in view of Hiroshi (U.S. Patent No. 3,278,811), Kowalski (U.S. Patent No. 5,570,000) and Ho (U.S. Patent No. 6,895,145). Moreover, Claims 25-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dinwoodie in view of Hiroshi, Kowalski, Ho and further in view of Albright et al. (U.S. Patent No. 5,674,325).

Applicant appreciates the opportunity to discuss the present invention in Examiner's interviews conducted between the Examiner and the inventor on December 3, 2008, on December 30, 2008, on February 19, 2009, as well as the discussion with the Examiner and the Examiner's Supervisor, Brian Glessner, on February 20, 2009.

All claims have been amended by the present response to the non-final Office Action. New Claim 42 has been added.

Independent Claims 1, 33 and 36 were officially rejected under 35 U.S.C. §103(a) as unpatentable over Dinwoodie in view of Hiroshi, Kowalski and Ho. Initially, Applicant respectfully submits that the rejection is improper because the Examiner has failed to indicate a reference number for Ho. A review of the references cited by the Examiner and the Applicant in the present application provides no indication of a reference to Ho. However,

subsequent communications with the Examiner indicate that the Examiner has cited U.S. Patent No. 6,895,145 as the *Ho* reference, so Applicant hereby responds to the Office Action under the assumption that *Ho* refers to U.S. Patent No. 6,895,145. If that is incorrect, Applicant respectfully requests correction by the Patent Office.

Independent Claims 21, 33 and 36 have been amended. None of either *Dinwoodie*, *Hiroshi*, *Kowalski* and *Ho*, taken singly or in combination, or any other prior art reference, teaches or suggests the elements of the present invention, as amended in independent Claims 21, 33 and 36. Moreover, none of either *Stanley* (U.S. Patent No. 5,261,435), *Laaly et al.* (U.S. Patent No. 4,860,509), *Albright* (U.S. Patent No. 5,674,325), *Mori* (U.S. Patent No. 3,278,811), *Lawheed* (U.S. Patent No. 6,672,064) and/or *Britannica* taken singly or in combination together or with the references noted above, teaches or suggests the elements of the present invention, as amended in independent Claims 21, 33 and 36.

In making the rejections under 35 U.S.C. §103(a) as unpatentable over *Dinwoodie* in view of *Hiroshi*, *Kowalski* and *Ho*, the Patent Office alleged:

Dinwoodie shows a shelter/carport capable of producing electrical energy comprising a canopy defining a sheltered area thereunder, the shelter area including at least one vehicle parking space (the space beneath the shade system inherently is able to accommodate a vehicle parking there), a supporting structure (the posts) connected to the supporting the canopy and permitting substantially unobstructed access by a vehicle to the

sheltered area, a photovoltaic device associated with the canopy, the device capable of producing an electric current when exposed to sunlight (per the solar electric which means converting solar power to electrical power), the shelter having no walls, the device is supported by the canopy, the device is on the canopy, the device forming the canopy (inherently so as the device is part of the canopy structure), the device producing DC electrical current when exposed to sunlight, the canopy including an upper surface having a first voltaic device, a lower surface.

See Office Action dated July 9, 2007, page 2.

As an initial matter, Applicant respectfully disagrees that *Dinwoodie* shows a shelter/carport "including at least one vehicle parking space." *Dinwoodie* is a design patent that merely illustrates the ornamental design features of a "solar electric shade system" and fails to show or even remotely teach or disclose a vehicle parking space. There is simply no teaching, inherent or otherwise, that the ornamental design of *Dinwoodie* is or could be used to shelter a vehicle in a parking space, as required by the present invention.

The Patent Office further alleges:

Dinwoodie does not show an electrical load operatively connected to the first and second device for utilizing the electricity generated by the device when the device is exposed to light, a second photovoltaic device on the lower surface of the canopy and directed toward the ground to receive light from the light source, the second device is able to produce an electrical current when exposed to light, a light emitting device.

However, the Patent Office continues:

Hiroshi discloses the use of both sides of a structure to enable the generation of electricity on both sides of a structure from sunlight.

Kowalski discloses a canopy having an electrical load operatively connected to an energy generating device.

HO discloses the use of either LED or OLED to display information.

See Office Action dated July 9, 2007, pp. 2-3.

With respect to independent Claim 21, independent Claim 21 has been amended to define a shelter comprising:

a photovoltaic canopy defining a sheltered area thereunder, the sheltered area including at least one vehicle parking space, the photovoltaic canopy comprising including an upper surface and having a first photovoltaic device, a lower surface having a second photovoltaic device, and a light emitting diode device, wherein the upper surface comprises a first and second photovoltaic layer devices are that is capable of producing an electrical current when exposed to light;

a supporting structure connected to and supporting the canopy and ~~permitting substantially unobstructed access by a vehicle to the sheltered area; and~~

~~an electrical load~~ a light emissive layer mounted on the lower surface and operatively connected to the first and second photovoltaic layer devices for utilizing the electricity generated by the photovoltaic device layer when the photovoltaic device layer is exposed to light, said light emissive layer oriented to emit light onto the photovoltaic layer for generating electricity.

~~wherein the shelter has no walls.~~

With respect to claim 33, Applicant has amended independent claim 33 to define a shelter comprising:

a canopy having an underside defining a sheltered area thereunder, the sheltered area including at least one vehicle parking space;

a supporting structure connected to and supporting the canopy and ~~permitting substantially unobstructed access by a vehicle to the sheltered area;~~

~~a photovoltaic device associated with wherein the canopy comprises a, the photovoltaic device being capable of producing an electrical current when exposed to sunlight, and wherein the canopy photovoltaic device including comprises a light emitting coating layer attached to the underside of the canopy and powered by electricity generated by the photovoltaic device wherein and the photovoltaic device is capable of generating generates electricity from the light emitted by the light emitting coating layer; and~~

~~an electrical load operatively connected to the wherein the photovoltaic device generates for utilizing electricity generated by the photovoltaic device when the photovoltaic device is exposed to from at least one of sunlight and light emitted by the light emitting layer,~~

wherein the shelter has no walls.

With respect to Claim 36, Applicant has amended independent

Claim 36 to define a carport comprising:

at least one photovoltaic canopy, the photovoltaic canopy sheltering a parking area for at least one vehicle;

a supporting structure connected to and supporting the photovoltaic canopy and permitting substantially unobstructed access by a vehicle to the parking area;

~~a photovoltaic device associated with the canopy, wherein the photovoltaic device canopy being capable of producing produces a DC electrical current when exposed to sunlight, the photovoltaic canopy device including comprising an upper surface and a lower surface, said lower surface comprising a light emitting diode coating panel attached thereto and powered by the photovoltaic canopy, and the photovoltaic canopy device is capable of generating generates electricity from the light emitted by the light emitting diode coating panel; and~~

an electrical load operatively connected to the photovoltaic device canopy for utilizing the electricity generated by the photovoltaic canopy device when the photovoltaic canopy device is exposed to light at least one of sunlight and light from the light emitting diode panel wherein the electrical load is selected from the

~~group consisting of the power distribution grid of a utility company and a battery~~

Applicant respectfully submits that the art, as cited, fails to teach or even remotely disclose the features of amended independent Claims 21, 33 and 36.

Applicant respectfully submits that neither *Dinwoodie*, *Hiroshi*, *Kowalski* nor *Ho*, nor any other prior art reference, discloses these elements. *Dinwoodie*, as noted above, fails to teach or disclose a photovoltaic canopy defining a sheltered area thereunder, the sheltered area including at least vehicle parking space (as claimed in Claims 33 and 36). Moreover, *Dinwoodie* fails to teach or disclose a supporting structure connected to and supporting the canopy permitting access by a vehicle to the sheltered area. There is simply no disclosure of a supporting structure permitting access by a vehicle in *Dinwoodie*. Still further, there is no disclosure of a light emissive layer mounted on the lower surface and operatively connected to the photovoltaic layer for utilizing the electricity generated by the photovoltaic layer when the photovoltaic layer is exposed to light.

None of *Hiroshi*, *Kowalski* and *Ho* cures the deficiencies of *Dinwoodie* with respect to amended claim 21. *Hiroshi* merely relates to a radiation transducing device and fails to teach or even remotely disclose a light emissive layer mounted on the lower surface and operatively connected to the photovoltaic layer for

utilizing the electricity generated by the photovoltaic layer when the photovoltaic layer is exposed to light.

In addition, *Kowalski* also fails to cure the deficiencies of *Dinwoodie* and *Hiroshi*, as noted above. *Kowalski* merely relates to a light assembly, utilizing a solar panel and light bulbs disposed thereunder. *Kowalski* fails to teach or even remotely disclose a light emissive layer mounted on the lower surface of the photovoltaic canopy. *Kowalski* relates to a plate disposed over, for example, address numbers on a house. In that sense, *Kowalski* is also non-analogous art. One having ordinary skill in the art would not look to *Kowalski* to solve the problems solved by the present invention.

Finally, *Ho* also fails to cure the deficiencies of the cited references. *Ho* merely relates to an apparatus and method for collecting light and describes a spherical lens used to focus and direct light into an optical fiber for transmitting the light to an energy converter, a lighting or heating system, or a light or heating apparatus. There is simply no disclosure in *Ho*, and the Examiner has failed to provide any citation to, a light emissive layer mounted on the lower surface of the photovoltaic canopy and operatively connected to the photovoltaic layer for utilizing the electricity generated by the photovoltaic layer when the photovoltaic layer is exposed to light.

Moreover, *Dinwoodie* fails to teach or even remotely disclose a photovoltaic device or photovoltaic canopy, respectively, capable of producing electrical current or DC electrical current, respectively, when exposed to light and wherein the canopy comprises a light emissive layer, a light emitting diode layer or panel, respectively, attached to the canopy and powered by the photovoltaic device or canopy, wherein the photovoltaic device or canopy also generates electricity from the light emitted by the light emissive layer, the emitting diode layer or panel. This feature relates to the fact that the present invention defines a "self-regenerating" system, whereby the amount of electricity generated by the shelter or carport can be enhanced by generating electricity from light generated by the photovoltaic device or canopy, as defined in independent Claims 21, 33 and 36.

There is simply no teaching or disclosure in any of the cited references, or any other reference, for this feature of independent Claims 21, 33 and 36.

As noted above, *Hiroshi* merely relates to a radiation transducing device. *Kowalski* merely relates to a light assembly, utilizing a solar panel and light bulbs disposed thereunder. *Ho* merely relates to an apparatus and method for collecting light and describes a spherical lens used to focus and direct light into an optical fiber for transmitting the light to an energy converter, a lighting or heating system, or a light or heating apparatus. There is simply no teaching in any of the cited references, or any other

prior art reference, for a light emitting layer or panel attached to the canopy and powered by the photoelectric device wherein the photovoltaic device or canopy generates electricity from the light emitted by the light emissive layer, the light emitting diode layer or panel, respectively, as claimed in independent Claims 21, 33 and 36.

Moreover, a person having ordinary skill in the art would never have been motivated to combine *Dinwoodie*, *Hiroshi*, *Kowalski* and/or *Ho* in the manner suggested by the Patent Office in formulating the rejections under 35 U.S.C. §103(a). Applicant submits that the Patent Office is merely "piece-mealing" references together, providing various teachings and positively defined limitations of Applicant's invention to deprecate the claimed invention. Of course, hindsight reconstruction of Applicant's invention is impermissible.

In addition, a person having ordinary skill in the art would never have been motivated to combine *Stanley*, *Laaly et al.*, *Albright et al.*, *Mori*, *Lawheed*, or *Britannica*, singly or in combination together or with the references noted above. None of these references teach or disclose the distinguishing feature, that is a light emissive layer mounted on the lower surface and operatively connected to the photovoltaic layer for utilizing the electricity generated by the photovoltaic layer when the photovoltaic layer is exposed to light, said light emissive layer oriented to emit light onto the photovoltaic layer for generating

electricity (as in Claim 21); a light emitting layer attached to the underside of the canopy and powered by electricity generated by the photovoltaic device wherein the photovoltaic device generates electricity from the light emitted by the light emitting layer (as in Claim 33); and a light emitting diode panel attached thereto and powered by the photovoltaic canopy, and the photovoltaic canopy generates electricity from the light emitted by the light emitting diode panel (as in Claim 36).

With the analysis of the deficiencies of *Dinwoodie*, *Hiroshi*, *Kowalski*, *Ho*, *Stanley*, *Laaly et al.*, *Albright et al.*, *Mori*, *Lawheed*, and/or *Britannica* in mind, no reason or suggestion in the evidence of record exists why one of ordinary skill in the art would have been led to combine *Dinwoodie*, *Hiroshi*, *Kowalski*, *Ho*, *Stanley*, *Laaly et al.*, *Albright et al.*, *Mori*, *Lawheed*, and/or *Britannica* in the manner suggested by the Patent Office in formulating the rejections under 35 U.S.C. §103(a). See *Ex Parte Prado*, Decision on Appeal, Appeal No. 2008-2042, Nov. 7, 2008, pp. 6-7 (Prior art did not teach that container-retaining loop is slidable; the examiner failed to provide a reason to modify the prior art to make it slidable). Therefore, *prima facie* obviousness has not been established by the Patent Office as required under 35 U.S.C. §103(a).

It is respectfully submitted that the question under §103(a) is whether the totality of the art would collectively suggest the

claimed invention to one of ordinary skill in this art. *In re Simon*, 461 F.2d 1387, 174 USPQ 114 (CCPA 1972).

Applicant further respectfully submits that one having ordinary skill in the art at the time of Applicant's invention would never have been motivated to combine *Dinwoodie*, *Hiroshi*, *Kowalski*, *Ho*, *Stanley*, *Laaly et al.*, *Albright et al.*, *Mori*, *Lawheed*, and/or *Britannica* in the manner suggested by the Patent Office in formulating the rejection under 35 U.S.C. §103(a).

That elements, even distinguishing elements, are disclosed in the art is alone insufficient. It is common to find elements somewhere in the art. Moreover, most, if not all, elements perform their ordained and expected functions. The test is whether the invention as a whole, in light of the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1545, 220 USPQ 193 (Fed. Cir. 1983).

Applicant submits that the Patent Office has merely located components of Applicant's claimed invention. However, that the art disclosed components of Applicant's claimed invention, either separately or used in other combinations, is insufficient. A teaching, suggestion or incentive must exist to make the combination made by the Applicant. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1988).

Even assuming that one having ordinary skill in the art could somehow have combined *Dinwoodie*, *Hiroshi*, *Kowalski*, *Ho*, *Stanley*,

Laaly et al., *Albright et al.*, *Mori*, *Lawheed*, and/or *Britannica* as set forth by the Patent Office, the resultant combination still lacks the novel elements positively recited in independent Claims 21, 33 and 36. See *Ex Parte Dutta and Ramamoorthy*, Decision on Appeal, Appeal No. 2008-4046, Dec. 2, 2008, p. 5 ("The Examiner has failed to provide any reference to a "Registration Server" in either the reference of Wellman or eBay as required by the limitation in the claims.")

In view of the foregoing remarks and amendments, Applicant respectfully submits that the rejections of independent Claims 21, 33 and 36 under 35 U.S.C. §103(a) as being unpatentable over *Dinwoodie*, *Hiroshi*, *Kowalski*, *Ho*, *Stanley*, *Laaly et al.*, *Albright et al.*, *Mori*, *Lawheed*, and/or *Britannica*, has been overcome and should be withdrawn. Notice to that effect is respectfully requested.

Applicant further respectfully submits that none of the art previously cited by the Examiner, nor the art submitted in the concurrently filed Information Disclosure Statement and Form PTO-SB/08a and PTO/SB/08b, taken singly or in combination, teaches or suggests the elements of the present invention as defined in amended independent Claims 21, 33 and 36.

Claims 23-29 and 31-32 depend from independent Claim 22; Claims 34-35 depend from independent Claim 33; and Claims 37-41 depend from independent Claim 36. These claims are further believed allowable over the references of record for the same

reasons set forth above with respect to their parent claim since each sets forth additional novel components of Applicant's shelters and carport.

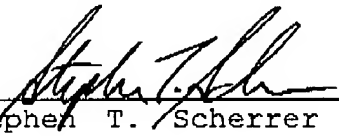
In view of the foregoing remarks and amendments, Applicant respectfully submits that all of the claims in the application are in allowable form and that the application is now in condition for allowance. If any outstanding issues remain, Applicant urges the Patent Office to telephone Applicant's attorney so that the same may be resolved and the application expedited to issue. Applicant requests the Patent Office to indicate all claims as allowable and to pass the application to issue.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this **Amendment** and **Transmittal (in duplicate)**, are being filed at the U.S. Patent and Trademark Office by facsimile transmitted on February 20, 2009.



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